Project Title	Funding	Strategic Plan Objective	Institution
Role of GluK6 in cerebella circuitry development	$58,442	Q2.Other	Yale University
Morphogenesis and function of the cerebral cortex	$409,613	Q2.Other	Yale University
Functional analysis of patient mutations in EPHB2, an ASD candidate gene- Project 1	$177,512	Q2.Other	Yale University
Identification of candidate genes at the synapse in autism spectrum disorders	$168,839	Q2.Other	Yale University
Novel candidate mechanisms of fragile X syndrome	$92,448	Q2.S.D	Yale University
Role of major vault protein in autism	$59,972	Q2.Other	Yale University
Functional analysis of EFR3A mutations associated with autism	$156,250	Q2.Other	Yale University
Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments	$42,232	Q2.S.D	Yale University
Allelic choice in Rett syndrome	$390,481	Q2.S.D	Winifred Masterson Burke Medical Research Institute
Studying Rett and Fragile X syndrome in human ES cells using TALEN technology	$0	Q2.S.D	Whitehead Institute for Biomedical Research
Genetically defined stem cell models of Rett and fragile X syndrome	$350,000	Q2.S.D	Whitehead Institute for Biomedical Research
Developing novel automated apparatus for studying battery of social behaviors in mutant mouse models for autism	$0	Q2.Other	Weizmann Institute of Science
Genetic model to study the ASD-associated gene A2BP1 and its target PAC1	$62,500	Q2.Other	Weizmann Institute of Science
Role of neuronal migration genes in synaptogenesis and plasticity	$52,190	Q2.Other	Weill Cornell Medical College
High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism	$54,500	Q2.Other	Weill Cornell Medical College
Role of intracellular mGluR5 in fragile X syndrome and autism	$75,000	Q2.S.D	Washington University in St. Louis
The role of intracellular metabotropic glutamate receptor 5 at the synapse	$13,400	Q2.S.D	Washington University in St. Louis
Genetic and developmental analyses of fragile X mental retardation protein	$438,391	Q2.S.D	Vanderbilt University Medical Center
Translational regulation of adult neural stem cells	$396,944	Q2.S.D	University of Wisconsin - Madison
Macrocephalic autism: Exploring and exploiting the role of PTEN	$0	Q2.Other	University of Wisconsin - Madison
Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination	$53,942	Q2.S.D	University of Texas Southwestern Medical Center
Cortical circuit changes and mechanisms in a mouse model of fragile X syndrome	$278,656	Q2.S.D	University of Texas Southwestern Medical Center
Mechanisms of synapse elimination by autism-linked genes	$434,883	Q2.S.D	University of Texas Southwestern Medical Center
Coordinated control of synapse development by autism-linked genes	$0	Q2.S.D	University of Texas Southwestern Medical Center

Project Title	Funding	Strategic Plan Objective	Institution
Mechanisms of mGluR5 function and dysfunction in mouse autism models	$406,760	Q2.S.D	University of Texas Southwestern Medical Center
Study of fragile X mental retardation protein in synaptic function and plasticity	$317,077	Q2.S.D	University of Texas Southwestern Medical Center
Mouse models of human autism spectrum disorders: Gene targeting in specific brain regions	$400,000	Q2.S.D	University of Texas Southwestern Medical Center
Function and structure adaptations in forebrain development	$541,770	Q2.Other	University of Southern California
Engrailed targets and the control of synaptic circuits in Drosophila	$352,100	Q2.Other	University of Puerto Rico Medical Sciences Campus
Functional circuit disorders of sensory cortex in ASD and RTT	$254,976	Q2.S.D	University of Pennsylvania
The role of genetics in communication deficits in autism spectrum disorders	$60,000	Q2.S.D	University of Pennsylvania
Transcriptional responsiveness in lymphoblastoid cell lines	$0	Q2.Other	University of Pennsylvania
Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome	$56,000	Q2.S.D	University of North Carolina at Chapel Hill
Genetic studies of autism-related Drosophila neurexin and neuroligin	$489,104	Q2.Other	University of North Carolina at Chapel Hill
Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase	$60,000	Q2.S.D	University of North Carolina at Chapel Hill
Regulation of spine morphogenesis by NrCAM	$185,000	Q2.Other	University of North Carolina at Chapel Hill
Effect of paternal age on mutational burden and behavior in mice	$222,000	Q2.Other	University of North Carolina at Chapel Hill
Homeostatic regulation of presynaptic function by dendritic mTORC1	$32,747	Q2.Other	University of Michigan
Molecular mechanisms of the synaptic organizer alpha-neurexin	$383,267	Q2.Other	University of Michigan
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	$0	Q2.S.E	University of Melbourne
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	$0	Q2.S.E	University of Melbourne
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	$0	Q2.S.E	University of Melbourne
Caspr2 as an autism candidate gene: A proteomic approach to function & structure	$312,000	Q2.Other	University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School
The microRNA pathway in translational regulation of neuronal development	$352,647	Q2.S.D	University of Massachusetts Medical School
Molecular dissection of calmodulin domain functions	$321,473	Q2.Other	University of Iowa
Synaptic phenotype, development, and plasticity in the fragile X mouse	$395,134	Q2.S.D	University of Illinois at Urbana Champaign

Project Title	Funding	Strategic Plan Objective	Institution
Serotonin signal transduction in two groups of autistic patients	$0	Q2.Other	University of Illinois at Chicago
Self-injurious behavior: An animal model of an autism endophenotype	$0	Q2.Other	University of Florida
Physiological studies in a human stem cell model of 15q duplication syndrome	$60,000	Q2.S.D	University of Connecticut
Cerebellar plasticity and learning in a mouse model of autism	$156,250	Q2.Other	University of Chicago
Extended tracking of single synaptic proteins with upconverting nanoparticles	$10,819	Q2.Other	University of California; Lawrence Berkeley National Laboratory
A sex-specific dissection of autism genetics	$0	Q2.S.B	University of California, San Francisco
Characterizing the regulatory pathways and regulation of AUTS2	$57,964	Q2.Other	University of California, San Francisco
A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons	$60,000	Q2.Other	University of California, San Francisco
Role of negative regulators of FGF signaling in frontal cortex development and autism	$45,000	Q2.Other	University of California, San Francisco
Deciphering the function and regulation of AUTS2	$0	Q2.Other	University of California, San Francisco
Kinetics of drug macromolecule complex formation	$712,921	Q2.Other	University of California, San Diego
Identification of genetic pathways that regulate neuronal circuits in C. elegans	$47,114	Q2.Other	University of California, San Diego
Using fruit flies to map the network of autism-associated genes	$156,245	Q2.Other	University of California, San Diego
Elucidation of the developmental role of Jakmip1, and autism-susceptibility gene	$31,474	Q2.Other	University of California, Los Angeles
Imaging PTEN-induced changes in adult cortical structure and function in vivo	$300,156	Q2.Other	University of California, Los Angeles
Investigation of sex differences associated with autism candidate gene, Cyfip1	$32,413	Q2.S.B	University of California, Los Angeles
Role of autism-susceptibility gene, CNTNAP2, in neural circuitry for vocal communication	$0	Q2.Other	University of California, Los Angeles
Functional analysis of neurexin IV in Drosophila	$0	Q2.Other	University of California, Los Angeles
The role of neurexin IV in central nervous system development	$100,466	Q2.Other	University of California, Los Angeles
The role of Fox-1 in neurodevelopment and autistic spectrum disorder	$145,757	Q2.Other	University of California, Los Angeles
A functional genomic analysis of the cerebral cortex	$256,413	Q2.Other	University of California, Los Angeles
Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism	$615,849	Q2.Other	University of California, Irvine
BDNF and the restoration of synaptic plasticity in fragile X and autism	$470,063	Q2.S.D	University of California, Irvine

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Cortactin and spine dysfunction in fragile X	$32,875	Q2.S.D	University of California, Irvine
The role of MeCP2 in Rett syndrome	$382,858	Q2.S.D	University of California, Davis
Mechanism of UBE3A imprint in neurodevelopment	$34,439	Q2.S.D	University of California, Davis
Inhibitory mechanisms for sensory map plasticity in cerebral cortex	$328,644	Q2.Other	University of California, Berkeley
Presynaptic regulation of quantal size by the cation/H+ exchangers NHE6 & NHE9	$33,932	Q2.Other	University of California, Berkeley
Met signaling in neural development and circuitry formation	$249,000	Q2.Other	University of Arizona
MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism	$314,059	Q2.S.D	University of Alabama at Birmingham
Understanding the basic neurobiology of Pitt-Hopkins syndrome	$60,000	Q2.S.D	The University of Alabama at Birmingham
Impact of SynGAP1 mutations on synapse maturation and cognitive development	$789,981	Q2.Other	The Scripps Research Institute - Florida
Cell adhesion molecules in CNS development	$534,562	Q2.Other	The Scripps Research Institute - California
A stem cell based platform for identification of common defects in autism spectrum disorders	$0	Q2.S.D	The Scripps Research Institute - California
Glial control of neuronal receptive ending morphology	$418,275	Q2.Other	The Rockefeller University
RNA dysregulation in autism	$125,000	Q2.Other	The Rockefeller University
Defining cells and circuits affected in autism spectrum disorders	$336,872	Q2.Other	The Rockefeller University
Fragile X syndrome target analysis and its contribution to autism	$134,477	Q2.S.D	The Rockefeller University
Revealing protein synthesis defects in fragile X syndrome with new chemical tools	$340,520	Q2.S.D	Stanford University
Modulation of fxr1 splicing as a treatment strategy for autism in fragile X syndrome	$0	Q2.S.D	Stanford University
L-type calcium channel regulation of neuronal differentiation	$33,002	Q2.S.D	Stanford University
Function and dysfunction of neuroligins in synaptic circuits	$750,000	Q2.Other	Stanford University
Function of neurexins	$473,710	Q2.Other	Stanford University
Probing a monogenic form of autism from molecules to behavior	$0	Q2.S.D	Stanford University
Role of CNTNAP2 in neuronal structural development and synaptic transmission	$53,500	Q2.Other	Stanford University
Genomic and epigenomic effects of large CNV in neurons from iPSC	$2,355,000	Q2.S.G	Stanford University

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Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome	$155,380	Q2.S.D	Stanford University
Mesocorticolimbic dopamine circuitry in mouse models of autism	$436,362	Q2.S.D	Stanford University
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	$470,003	Q2.Other	Sloan-Kettering Institute for Cancer Research
Perturbed cortical patterning in autism	$60,000	Q2.Other	Seattle Children's Hospital
MTHFR functional polymorphism C677T and genomic instability in the etiology of idiopathic autism in simplex families	$0	Q2.Other	Queen's University
Neuroligin, oxidative stress and autism	$150,000	Q2.Other	Oklahoma Medical Research Foundation
Regulation of cortical critical periods in a mouse model of autism	$60,000	Q2.S.D	Northwestern University
Understanding the role of Epac2 in cognitive function	$47,232	Q2.Other	Northwestern University
A family-genetic study of autism and fragile X syndrome	$751,420	Q2.S.D	Northwestern University
Excessive cap-dependent translation as a molecular mechanism underlying ASD	$0	Q2.Other	New York University
Early expression of autism spectrum disorder in experimental animals	$0	Q2.Other	Neurochlore
Dysregulation of protein synthesis in fragile X syndrome	$1,117,731	Q2.S.D	National Institutes of Health
Role of Sema7A in functional organization of neocortex	$423,750	Q2.S.D	Mount Sinai School of Medicine
Making the connection between autism, serotonin and hedgehog signaling	$125,635	Q2.S.D	Medical Research Council-National Institute for Medical Research
Functional analysis of patient mutations in EPHB2, an ASD candidate gene- Core	$62,475	Q2.Other	McLean Hospital
Regulation of synaptogenesis by cyclin-dependent kinase 5	$0	Q2.Other	Massachusetts Institute of Technology
Shank3 in synaptic function and autism	$401,250	Q2.Other	Massachusetts Institute of Technology
Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans	$250,000	Q2.Other	Massachusetts General Hospital
Molecular signatures of autism genes and the 16p11.2 deletion	$62,500	Q2.Other	Massachusetts General Hospital
MicroRNAs in synaptic plasticity and behaviors relevant to autism	$131,220	Q2.S.D	Massachusetts General Hospital
Identification of targets for the neuronal E3 ubiquitin ligase PAM	$0	Q2.S.D	Massachusetts General Hospital
Roles of miRNAs in regulation of Foxp2 and in autism	$45,000	Q2.Other	Louisiana State University
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	$149,881	Q2.S.D	King's College London

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The role of CNTNAP2 in embryonic neural stem cell regulation	$0	Q2.Other	Johns Hopkins University School of Medicine
Olfactory abnormalities in the modeling of Rett syndrome	$351,575	Q2.S.D	Johns Hopkins University
Dynamic regulation of Shank3 and ASD	$646,316	Q2.Other	Johns Hopkins University
The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders	$0	Q2.Other	Johns Hopkins University
Why are autistic females rare and severe? An approach to autism gene identification.	$28,600	Q2.S.B	Johns Hopkins University
High throughput screen for small molecule probes for neural network development	$405,000	Q2.Other	Johns Hopkins University
In vivo targeted gene silencing, a novel method	$192,500	Q2.Other	Indiana University-Purdue University Indianapolis
Multigenic basis for autism linked to 22q13 chromosomal region	$125,000	Q2.S.D	Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY
Activity-dependent phosphorylation of MeCP2	$177,055	Q2.S.D	Harvard Medical School
The role of UBE3A in autism	$312,501	Q2.S.D	Harvard Medical School
Proteome and interaction networks in autism	$156,250	Q2.Other	Harvard Medical School
Underlying mechanisms in a cerebellum-dependent model of autism	$60,000	Q2.S.D	Harvard Medical School
Urokinase-type plasminogen activator plasma concentration and its relationship to hepatocyte growth factor (HGF) and GABA levels in autistic children	$8,505	Q2.Other	Hartwick College
Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome	$150,000	Q2.S.D	George Washington University
Regulation of 22q11 genes in embroyonic and adult forebrain	$308,631	Q2.S.D	George Washington University
Regulation of 22q11 genes in embroyonic and adult forebrain (supplement)	$24,262	Q2.S.D	George Washington University
Quantitative proteomic approach towards understanding and treating autism	$75,000	Q2.S.D	Emory University
Young development of a novel PET ligand for detecting oxytocin receptors in brain	$261,360	Q2.Other	Emory University
Young development of a novel PET ligand for detecting oxytocin receptors in brain (supplement)	$176,000	Q2.Other	Emory University
Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1	$30,912	Q2.Other	Emory University
PI3K/mTOR signaling as a novel biomarker and therapeutic target in autism	$0	Q2.Other	Emory University
Imaging signal transduction in single dendritic spines	$382,200	Q2.Other	Duke University
Analysis of Shank3 complete and temporal and spatial specific knockout mice	$481,448	Q2.Other	Duke University

Project Title	Funding	Strategic Plan Objective	Institution
The striatal circuitry underlying autistic-like behaviors	$31,975	Q2.Other	Duke University
The impact of Pten signaling on neuronal form and function	$346,014	Q2.Other	Dartmouth College
New approaches to local translation: SpaceSTAMP of proteins synthesized in axons	$419,095	Q2.S.D	Dana-Farber Cancer Institute
Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	$300,000	Q2.S.D	Columbia University
Role of neurexin in the amygdala and associated fear memory	$175,000	Q2.Other	Columbia University
Neurexin-neuroligin trans-synaptic interaction in learning and memory	$200,000	Q2.Other	Columbia University
Investigation of a possible role of the protocahderin gene cluster in autism	$150,000	Q2.Other	Columbia University
High-throughput DNA sequencing method for probing the connectivity of neural circuits at single-neuron resolution	$464,475	Q2.Other	Cold Spring Harbor Laboratory
Investigation of social brain circuits in mouse models of the 16p11.2 locus	$175,000	Q2.Other	Cold Spring Harbor Laboratory
The functional link between DISC1 and neuroligins: Two genetic factors in the etiology of autism	$0	Q2.S.D	Children's Memorial Hospital, Chicago
ERK signaling in autism associated with copy number variation of 16p11.2	$51,290	Q2.Other	Case Western Reserve University
TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	$147,806	Q2.S.D	Case Western Reserve University
Autism and the insula: Genomic and neural circuits	$254,696	Q2.Other	California Institute of Technology
Functional role of IL-6 in fetal brain development and abnormal behavior	$42,232	Q2.Other	California Institute of Technology
Endosomal NHE6 in long-range connectivity and autism	$62,500	Q2.Other	Brown University
Elucidating the function of class 4 semaphorins in GABAergic synapse formation (supplement)	$23,015	Q2.Other	Brandeis University
Elucidating the function of class 4 semaphorins in GABAergic synapse formation	$336,922	Q2.Other	Brandeis University
Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS	$27,814	Q2.Other	Brandeis University
Neuropeptide regulation of juvenile social behaviors	$29,550	Q2.Other	Boston College
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	$149,958	Q2.S.D	Boston Children's Hospital
Probing synaptic receptor composition in mouse models of autism	$124,998	Q2.S.D	Boston Children's Hospital
Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder	$380,625	Q2.S.D	Beth Israel Deaconess Medical Center

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TMLHE deficiency and a carnitine hypothesis for autism	$60,000	Q2.S.D	Baylor College of Medicine
In-vivo imaging of neuronal structure and function in a reversible mouse model for autism.	$0	Q2.S.D	Baylor College of Medicine
The role of the new mTOR complex, mTORC2, in autism spectrum disorders	$625,998	Q2.Other	Baylor College of Medicine
Upper motor neuron plasticity in the MeCP2-duplication syndrome of autism	$62,500	Q2.S.D	Baylor College of Medicine
Investigating the homeostatic role of MeCP2 in mature brain	$35,832	Q2.S.D	Baylor College of Medicine
Pathophysiology of MECP2 spectrum disorders (Career Development Award Proposal)	$179,981	Q2.S.D	Baylor College of Medicine
Genetic rescue of fragile X syndrome in mice by targeted deletion of PIKE	$0	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Dysregulation of mTOR signaling in fragile X syndrome	$415,000	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Dysregulation of mTOR signaling in fragile X syndrome (supplement)	$72,034	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Modeling 5-HT-absorbing neurons in neuropathology of autism	$250,500	Q2.Other	Albert Einstein College of Medicine of Yeshiva University